



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,587	07/15/2003	Chuji Ishikawa	240443US3	6880
22850	7590	10/20/2004	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			VERBITSKY, GAIL KAPLAN	
			ART UNIT	PAPER NUMBER
			2859	

DATE MAILED: 10/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/618,587

Applicant(s)

ISHIKAWA ET AL.

Examiner

Gail Verbitsky

Art Unit

2859

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 2, 6, 8, 19 and 23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3-5, 7, 9-14, 16-18 and 20-22 is/are rejected.
- 7) ☐ Claim(s) 15 is/are objected to.
- 8) ☒ Claim(s) 2, 6, 8, 19 and 23 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 10/15/2003.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election with traverse of the Invention I, claims 1-22, species 3B, 4B, 5A, 6A, 7B (corresponding to claims 22, 3, 5, 7, 20 respectively) in the reply filed on August 02, 2004 is acknowledged. The traversal is on the ground(s) that "the search and examination ... can be made without serious burden". This argument is not found to be persuasive because the Invention I is directed to a temperature detecting unit, classified in class 374, while the Invention II is directed to a fixing apparatus classified in class 101. Thus, different inventions require different search. Therefore, claims 2, 6, 8, 19, 23 are withdrawn from further consideration as drawn to non-elected invention/species.

The requirement is still deemed proper and is therefore made FINAL.

### ***Claim Objections***

2. Claims 15 and 17 are objected to because of the following informalities:

Claim 15: "the surface" in line 5 lacks antecedent basis,

Claim 17: "said airflow unit" in line 1 lacks antecedent basis. Perhaps applicant should replace "claim 1" in line 1 with --claim 16--. Is this a proper interpretation of the invention? Appropriate correction is required.

### ***Drawings***

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, both window members

Art Unit: 2859

should be shown with a fluorination organic compound in the same embodiment or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Art Unit: 2859

5. Claim 15 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. In this case, according to claim 15, both window members contain a fluorination organic compound. However, this limitation has not been clearly described in the specification.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 3, 7, 9, 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fraden (U.S. 5645349) in view Iacovangelo (U.S. 6261694).

Fraden discloses in Fig. 1 a non-contact temperature detecting unit/ device comprising a temperature-detecting sensor (sensing assembly) 4, which receives an IR rays radiated from an object of interest. The device also comprises a window member 13 arranged between the object and the sensor 4; the window is transparent to the IR radiation. In addition, the device comprises a frame (cap) 3 holding the window member 13.

For claim 7: the window is directly faces the sensor 4.

For claim 9: the window includes a planar surface facing the object.

For claim 11-12: the device also comprises a surrounding member that surrounds the device and includes the frame (cap) 3.

For claims 13-14: the partition 40 is arranged between the object and the sensor 4, and includes a frame (cap) 3.

Fraden does not explicitly teach that the window member comprises fluorine containing resin/ compound, as stated in claim 1, in combination with the remaining limitations of claims 1, 4-5, 7, 9, 11-14.

Iacovangelo discloses a device wherein, a window substrate comprising a fluorine containing resins. This would imply, that all surfaces of the window comprise fluorine-containing resins.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to add a fluorocarbon resin coating, as taught by Iacovangelo, on a surface of the window member of device disclosed by Fraden, so as to protect the window member from ambient moisture contamination, and thus, improve accuracy of the device by protecting the member from harsh environment, because this particular compound is known to be a good water-repellent.

With respect to the fluorination polymer being a resin, as stated in claim 5: the use of the particular compound/ polymer, i.e., fluorocarbon, as stated in claim 5, absent any criticality, is only considered to be the "optimum" polymer that a person having ordinary skill in the art at the time the invention was made using routine experimentation would have found obvious to provide for the window member disclosed by Fraden and Iacovangelo since it has been held to be a matter of obvious design choice and within

Art Unit: 2859

the general skill of a worker in the art to select a known polymer on the basis of its suitability for the intended use of the invention. In re Leshin, 125 USPQ 416.

8. Claims 1, 3-5, 7, 9, 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fraden (U.S. 5645349) in view Wallace et al. (U.S. 6624944) [hereinafter Wallace].

Fraden discloses in Fig. 1 a non-contact temperature detecting unit/ device comprising a temperature-detecting sensor (sensing assembly) 4 which receives an IR rays radiated from an object of interest. The device also comprises a window member 13 arranged between the object and the sensor 4, the window is transparent to the IR radiation. In addition, the device comprises a frame (cap) 3 holding the window member 13.

For claim 7: the window is directly faces the sensor 4.

For claim 9: the window includes a planar surface facing the object.

For claims 11-12: the device also comprises a surrounding member that surrounds the device and includes the frame (cap) 3.

For claims 13-14: the partition 40 is arranged between the object and the sensor 4, including a frame (cap) 3..

Fraden does not explicitly teach that the window member comprises fluorine containing resin/ compound, as stated in claim 1, in combination with the remaining limitations of claims 1, 3-5, 7, 9, 11-14.

Wallace discloses a device comprising a window 11 and a coating (membrane) 12 transmissive to an IR and comprising a fluorination material being a fluorocarbon polymer (col. 6, lines 56-57) on at least the outer surface of the window member (col. 2, line 65) or on both surfaces (col. 2, line 4).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to add a fluorocarbon polymer coating, as taught by Wallace, on both surfaces of the window member of device disclosed by Fraden, so as to protect the window member from ambient moisture contamination, and thus, improve accuracy of the device by protecting the member from harsh environment, because this particular compound is known to be a good water-repellent.

With respect to the fluorination polymer being a resin, as stated in claim 5: the use of the particular compound/ polymer, i.e., resin, as stated in claim 5, absent any criticality, is only considered to be the "optimum" polymer that a person having ordinary skill in the art at the time the invention was made using routine experimentation would have found obvious to provide for the window member disclosed by Fraden and Wallace since it has been held to be a matter of obvious design choice and within the general skill of a worker in the art to select a known polymer on the basis of its suitability for the intended use of the invention. In re Leshin, 125 USPQ 416.

9. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fraden and Wallace as applied to claims 1, 3-5, 7, 9, 11-14 above, and further in view of Murata et al. (U.S. 6781946) [hereinafter Murata].

Fraden and Wallace disclose the device as stated above in paragraph 8.



They do not teach that the window member comprises a lens shaped surface, as stated in claim 10.

Murata discloses a device wherein, an outer (object facing) surface 16b of a window member is lens-shaped.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the shape of the window member, disclosed by Fraden and Wallace, so as to have it lens-shaped, as taught by Murata, because the particular shape of the surface, i.e., lens-shaped, absent any criticality, is only considered to be an obvious modification of the shape disclosed by Fraden and Wallace because the court has held that a change in shape or configuration, without criticality, is within the level of skill in the art as the particular shape claimed by applicant is nothing more than one of numerous shapes that a person having ordinary skill in the art will find obvious to provide. In re Dailey, 149 USPQ 47 (CCPA 1976).

10. Claims 16-17 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fraden and Wallace as applied to claims 1, 3-5, 7, 9, 11-14 above, and further in view of Kawai et al. (U.S. 6397615) [hereinafter Kawai].

Fraden and Wallace disclose the device as stated above in paragraph 8.

They do not teach an airflow unit, as stated in claims 16-17 and 22.

Kawai teaches in Figs. 1-3 to detect temperature of a passenger compartment (object) comprising an infrared temperature detecting unit 31, an airflow unit comprising a fan (ventilator) and a suction member to respectively send and suck air in the

Art Unit: 2859

compartment and thus, between the infrared detecting unit and any point in the compartment.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add an airflow unit, as taught by Kawai, to the device, disclosed by Fraden and Wallace, so as to control the temperature of the object, as suggested by Kawai, in order to prevent overheating, and thus, possible heat exhaustion and dehydration of a passenger in the compartment.

11. Claims 18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fraden and Wallace as applied to claims 1, 3-5, 7, 9, 11-14 above, and further in view of Tamaoki (U.S. 6684037).

Fraden and Wallace disclose the device as stated above in paragraph 8.

They do not teach that the object is a fixing belt, as stated in claims 18 and 20.

Tamaoki discloses in Figs. 2-3 a fixing apparatus comprising a fixing member, which is a fixing roller or a fixing belt. Tamaoki teaches to obtain temperature of the fixing member by means of a non-contact temperature-detecting unit 5 (abstract).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the temperature detecting unit, disclosed by Fraden and Wallace, so as to obtain temperature of the fixing member, as taught by Tamaoki, because the fixing member is a heatable member/ object and its temperature should be remotely obtained, in order to prevent overheating and do not interrupt the operating process by using a contact thermometer.

Art Unit: 2859

With respect to “whereby”/“thereby”, as stated in claim 18: it has been held that the functional “whereby” statement does not define any structure and accordingly cannot serve to distinguish. In re Mason, 114 USPQ 127, 44 CCPA 937 (1957).

12. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fraden and Wallace as applied to claims 1, 3-5, 7, 9, 11-14 above, and further in view of Taino et al. (U.S. 6121596) [hereinafter Taino].

Fraden and Wallace disclose the device as stated above in paragraph 8.

They do not teach that the object is a food cooked, as stated in claim 21.

Taino teaches to use an infrared non-contact temperature-sensing device to obtain a temperature of the food being cooked in an electrically heating chamber.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the temperature detecting unit, disclosed by Fraden and Wallace, so as to obtain temperature of the food in the heating chamber, as taught by Taino, because the temperature of the food should be obtained, in order to prevent overheating and do not interrupt the operating process by using a contact thermometer.

#### ***Allowable Subject Matter***

13. Claim 15 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art cited in the PTO-892 and not mentioned above disclose related devices and methods.

Application/Control Number: 10/618,587

Page 11

Art Unit: 2859

Any inquiry concerning this communication should be directed to the Examiner Verbitsky who can be reached at (571) 272-2253 Monday through Friday 8:00 to 4:00 ET.

GKV

Gail Verbitsky

Primary Patent Examiner, TC 2800

A handwritten signature in black ink, appearing to read 'G. Verbitsky', written in a cursive style.

October 07, 2004